

a transmitter that transmits the first and second audio signals from the one or more elements of the storage medium in synchronization with the transmission of the video portion and the corresponding audio portion of the motion picture, to a plurality of personal listening devices, wherein each of the plurality of personal listening devices is associated with each of the plurality of listeners in the theatre audience, each of the personal listening devices comprising:

a first receiver that receives the first transmitted audio signal;  
a second receiver that receives the second transmitted audio signal;  
a first adjustment device that adjusts the first audio signal based on inputs from

81  
Cont the user;

a second adjustment device that adjusts the second audio signal based on inputs from the user;

an audio signal combining device that combines the first audio signal's spatial information channels with corresponding spatial information channels of the second audio signal, to produce a combined audio signal; and

one or more transducers that receives the combined audio signal, converts the combined audio signal to sounds, and outputs the sounds so they may be heard by each of the plurality of listeners associated with each of the plurality of personal listening devices in the audience;

wherein the system permits each of the plurality of listeners to adjust the first and second audio signals independently of other ones of the plurality of listeners in the audience.

4. (New) The system of claim 3, wherein the first and second receivers connect to one or more portions of an airline seat.

5. (New) The system of claim 3, further comprising a speaker system that emits the corresponding audio portion of the motion picture to the audience, if enabled.

6. (New) The system of claim 5, wherein at least one of the first receiver and the second receiver receives the respective transmitted audio signals independently of the speaker system.

7. (New) The system as in claim 5, wherein, if not enabled then the speaker system does not emit the corresponding audio portion of the motion picture to the audience.
8. (New) The system as in claim 3, wherein at least one of the first audio signal and the second audio signal is a monaural signal.
9. (New) The system as in claim 3, wherein at least one of the first audio signal and the second audio signal is a stereo signal, the stereo signal having left and right spatial information channels.
- B1  
cont 10. (New) The system as in claim 3, wherein at least one of the first audio signal and the second audio signal is a surround signal, the surround signal having spatial information channels that include left, center, right, and one or more surround channels.
11. (New) The system as in claim 3, wherein at least one of the first audio signal and the second audio signal is a multiple channel surround signal, the multiple channel surround signal having spatial information channels including left, left center, center, right center, right, and one or more surround channels.
12. (New) The system as in claim 3, wherein the first and second adjustment devices are volume controllable active amplifiers.
13. (New) The system as in claim 3, wherein the first and second adjustment devices are volume controllable passive attenuators.
14. (New) The system as in claim 3, wherein the first adjustment and the second adjustment devices are combined into a single volume control device.

15. (New) The system as in claim 14, wherein when the volume control device is moved in one direction, volume of the first audio signal increases while the volume of the second signal decreases, and when the volume control device is moved in the other direction, the volume of the second signal increases while the volume of the first signal decreases.

16. (New) The system as in claim 3, wherein the first receiver receives a first digital bit stream that includes the first audio signal and the second receiver receives a second digital bit stream that includes the second audio signal, the system further comprising:

- a first decoder that decodes the first digital bit stream; and
- a second decoder that decodes the second digital bit stream.

17. (New) The system as in claim 3, wherein the first receiver and the second receiver are integrated into a single receiver.

18. (New) The system as in claim 17, wherein the single receiver receives a single digital bit stream that includes the first audio signal and the second audio signal, the system further comprising:

- a single decoder that decodes the single digital bit stream.

19. (New) The system as in claim 3, wherein the first and second receivers receive wireless transmissions.

20. (New) The system as in claim 3, wherein the personal listening devices are at least one of stereo headphones, a monaural earphones, hearing aids, and assistive listening devices.

21. (New) The system as in claim 3, wherein the personal listening devices are body-worn receivers, the body-worn receivers providing the combined audio signal to one or more electro-acoustic transducers.

22. (New) The system as in claim 3, further comprising at least one of a waveguide and an amplifier to enhance the combined audio signal.

23. (New) The system as in claim 3, further comprising a processor that computes the ratio of the volume of the first audio signal to the volume second audio signal, wherein at least one of the first adjustment device, the second adjustment device, and the audio signal combining device automatically adjusts for and maintains the ratio of the first audio signal volume to the second audio signal volume.

24. (New) The system as in claim 23, wherein the processor computes the standard deviation of the audio signal over a finite time period.

B1  
Cont 25. (New) The system as in claim 23, wherein the ratio is stored in a memory for use by the audio signal combining device.

26. (New) The system as in claim 23, wherein the first and second adjustment devices are controlled by the user through a graphical user interface.

27. (New) The system as in claim 23, wherein the first adjustment device and the second adjustment device are coupled to a single user controllable volume adjustment device, the single user controllable volume adjustment device operating to adjust the volume of the combined audio signal through so that movement of the single user controllable volume adjustment device in a first direction increases the volume of the first audio signal level and decreases the volume of the second audio signal, and movement in a second direction increases the volume of the second audio signal and decreases the volume of the first audio signal.

28. (New) The system as in claim 3, wherein the corresponding audio portion of the motion picture is stored as first audio signal and second audio signal.

29. (New) A computer, comprising:  
the system as in claim 3, wherein the first and second adjustment devices are operated using at least one of computer software and hardware.
30. (New) The system as in claim 3, wherein the personal listening devices are at least one of a cellular telephone, a wireless communication device, a body-worn computer, a personal data assistant, a personal audio playback device, a television and a DVD player.
31. (New) The system as in claim 3, further comprising a third adjustment device that adjusts the volume of the combined audio signal.
32. (New) The system as in claim 31, wherein the third adjustment device includes a user-controllable switch that instantaneously achieves an original production mixture of the first audio signal and the second audio signal.
33. (New) The system as in claim 31, wherein the third adjustment device includes a surround processor that converts the combined audio signal to an audio signal having a predetermined number of spatial information channels.
34. (New) The system as in claim 33, wherein the surround processor converts the combined audio signal having left, center, right, right surround and left surround spatial information channels to a signal having only left and right spatial information channels.
35. (New) The system as in claim 3, wherein the second audio signal includes at least a portion of the first audio signal.
36. (New) A home theatre system that outputs a motion picture to each of a plurality of listeners in a manner that permits individualized audio volume adjustment for the plurality of listeners located in an audience of the home theatre environment, comprising:

a video device that displays the video portion of the motion picture to the audience;  
one or more elements of a storage medium that stores the video portion of the motion picture, the corresponding audio portion of the motion picture, a first audio signal being substantially a vocal signal and having one or more channels of spatial information, and a second audio signal including substantially audio content other than the audio content of the first audio signal and having one or more channels of spatial information;

a transmitter that transmits the first and second audio signals from the one or more elements of the storage medium in synchronization with the transmission of the video portion and the corresponding audio portion of the motion picture, to a plurality of personal listening devices, wherein each of the plurality of personal listening devices is associated with each of the plurality of listeners in the theatre audience, each of the personal listening devices comprising:

a first receiver that receives the first transmitted audio signal;

a second receiver that receives the second transmitted audio signal;

a first adjustment device that adjusts the first audio signal based on inputs from the user;

a second adjustment device that adjusts the second audio signal based on inputs from the user;

an audio signal combining device that combines the first audio signal's spatial information channels with corresponding spatial information channels of the second audio signal, to produce a combined audio signal; and

one or more transducers that receives the combined audio signal, converts the combined audio signal to sounds, and outputs the sounds so they may be heard by each of the plurality of listeners associated with each of the plurality of personal listening devices in the audience;

wherein the system permits each of the plurality of listeners to adjust the first and second audio signals independently of other ones of the plurality of listeners in the audience.

37. (New) The system of claim 36, wherein the first and second receivers connect to one or more portions of a chair.

38. (New) The system of claim 36, further comprising a speaker system that emits the corresponding audio portion of the motion picture to the audience, if enabled.
39. (New) The system of claim 38, wherein at least one of the first receiver and the second receiver receives the respective transmitted audio signals independently of the speaker system.
40. (New) The system as in claim 38, wherein, if not enabled then the speaker system that does not emit the corresponding audio portion of the motion picture to the audience.
41. (New) The system as in claim 36, wherein at least one of the first audio signal and the second audio signal is a monaural signal.
42. (New) The system as in claim 36, wherein at least one of the first audio signal and the second audio signal is a stereo signal, the stereo signal having left and right spatial information channels.
43. (New) The system as in claim 36, wherein at least one of the first audio signal and the second audio signal is a surround signal, the surround signal having spatial information channels that include left, center, right, and one or more surround channels.
44. (New) The system as in claim 36, wherein at least one of the first audio signal and the second audio signal is a multiple channel surround signal, the multiple channel surround signal having spatial information channels including left, left center, center, right center, right, and one or more surround channels.
45. (New) The system as in claim 36, wherein the first and second adjustment devices are volume controllable active amplifiers.

46. (New) The system as in claim 36, wherein the first and second adjustment devices are volume controllable passive attenuators.
47. (New) The system as in claim 36, wherein the first adjustment and the second adjustment devices are combined into a single volume control device.
48. (New) The system as in claim 47, wherein when the volume control device is moved in one direction, volume of the first audio signal increases while the volume of the second signal decreases, and when the volume control device is moved in the other direction, the volume of the second signal increases while the volume of the first signal decreases.
49. (New) The system as in claim 36, wherein the first receiver receives a first digital bit stream that includes the first audio signal and the second receiver receives a second digital bit stream that includes the second audio signal, the system further comprising:  
a first decoder that decodes the first digital bit stream; and  
a second decoder that decodes the second digital bit stream.
50. (New) The system as in claim 36, wherein the first receiver and the second receiver are integrated into a single receiver.
51. (New) The system as in claim 50, wherein the single receiver receives a single digital bit stream that includes the first audio signal and the second audio signal, the system further comprising:  
a single decoder that decodes the single digital bit stream.
52. (New) The system as in claim 36, wherein the first and second receivers receive wireless transmissions.



53. (New) The system as in claim 36, wherein the personal listening devices are at least one of stereo headphones, a monaural earphones, hearing aids, and assistive listening devices.

54. (New) The system as in claim 36, wherein the personal listening devices are body-worn receivers, the body-worn receivers providing the combined audio signal to one or more electro-acoustic transducers.

55. (New) The system as in claim 36, further comprising at least one of a waveguide and an amplifier to enhance the combined audio signal.

56. (New) The system as in claim 36, further comprising a processor that computes the ratio of the volume of the first audio signal to the volume second audio signal, wherein at least one of the first adjustment device, the second adjustment device, and the audio signal combining device automatically adjusts for and maintains the ratio of the first audio signal volume to the second audio signal volume.

57. (New) The system as in claim 56, wherein the processor computes the standard deviation of the audio signal over a finite time period.

58. (New) The system as in claim 52, wherein the ratio is stored in a memory for use by the audio signal combining device.

59. (New) The system as in claim 52, wherein the first and second adjustment devices are controlled by the user through a graphical user interface.

60. (New) The system as in claim 52, wherein the first adjustment device and the second adjustment device are coupled to a single user controllable volume adjustment device, the single user controllable volume adjustment device operating to adjust the volume of the combined audio signal through so that movement of the single user controllable volume adjustment device

in a first direction increases the volume of the first audio signal level and decreases the volume of the second audio signal, and movement in a second direction increases the volume of the second audio signal and decreases the volume of the first audio signal.

61. (New) The system as in claim 36, wherein the corresponding audio portion of the motion picture is stored as first audio signal and second audio signal.

62. (New) A computer, comprising:  
the system as in claim 36, wherein the first and second adjustment devices are operated using at least one of computer software and hardware.

63. (New) The system as in claim 36, wherein the personal listening devices are at least one of a cellular telephone, a wireless communication device, a body-worn computer, a personal data assistant, a personal audio playback device, a television and a DVD player.

64. (New) The system as in claim 36, further comprising a third adjustment device that adjusts the volume of the combined audio signal.

65. (New) The system as in claim 36, wherein the third adjustment device includes a user-controllable switch that instantaneously achieves an original production mixture of the first audio signal and the second audio signal.

66. (New) The system as in claim 65, wherein the third adjustment device includes a surround processor that converts the combined audio signal to an audio signal having a predetermined number of spatial information channels.

67. (New) The system as in claim 66, wherein the surround processor converts the combined audio signal having left, center, right, right surround and left surround spatial information channels to a signal having only left and right spatial information channels.

68. (New) The system as in claim 36, wherein the second audio signal includes at least a portion of the first audio signal.

69. (New) A method of producing a substantially constant amplitude ratio of a first signal amplitude to a second signal amplitude in an audio program, the method comprising:

calculating a first value representative of the first signal amplitude at a first time;

calculating a second value representative of the second signal amplitude at the first time;

calculating a third value representative of the first signal amplitude at a second time, the second time being subsequent to the first time;

calculating a fourth value representative of the second signal amplitude of the second signal at the second time;

generating a first adjusted signal amplitude comprising a product of the first signal amplitude at a third time and a ratio of the first value to the third value;

generating a second adjusted signal amplitude comprising a product of the second signal amplitude at the third time and a ratio of the second value to the fourth value; and

combining the first adjusted signal amplitude and the second adjusted signal amplitude to produce an output signal.

70. (New) The method of claim 69, wherein the first signal comprises substantially a voice signal, and the second signal comprises substantially audio content other than the voice signal.

71. (New) The method of claim 69, further comprising:

adjusting the first signal amplitude prior to calculating the first value;

receiving a signal to initiate the calculation of the first value at the first time; and

storing at least one of a fifth value representative of the first adjusted signal amplitude and a sixth value representative of the second adjusted signal amplitude.

72. (New) The method of claim 69, wherein at least one of the first value, the second value, the third value and the fourth value is a value representative of an instantaneous signal amplitude.

73. (New) The method of claim 69, wherein at least one of the first value, the second value, the third value and the fourth value is a value representative of a standard deviation of signal amplitude.

74. (New) The method of claim 69, wherein at least one of the first value, the second value, the third value and the fourth value is a value representative of a peak signal level over a period of time.

75. (New) The method of claim 69, further comprising:  
selecting a ratio of the first signal amplitude to the second signal amplitude prior to calculating the first value; and  
receiving an initiation signal to initiate calculation of the first value at the first time.

81  
cont  
76. (New) The method of claim 75, further comprising:  
receiving a ratio input signal from a user, wherein the ratio is selected based on the ratio input signal.

77. (New) The method of claim 75, wherein the ratio is selected by adjusting the first signal amplitude independent of adjusting the second signal amplitude.

78. (New) The method of claim 75, wherein the ratio is selected by adjusting of the second signal amplitude independent of adjusting the first signal amplitude.

79. (New) The method of claim 75, wherein the ratio is selected by simultaneously adjusting the first and second signals by one of:  
increasing the first signal amplitude and commensurately decreasing the second signal amplitude, and  
decreasing the first signal amplitude and commensurately increasing the second signal amplitude.

80. (New) The method of claim 69, further comprising:

detecting segments of the audio program when the second signal amplitude is substantially zero, wherein if during the detected segment, the fourth value is calculated to be less than the second value, then limiting the second adjusted signal level amplitude to a predetermined value.

81. (New) The method of claim 69, wherein if the fourth value is less than the second value, then adjusting the second adjusted signal amplitude to be equal to the second signal amplitude.

82. (New) The method of claim 69, wherein the second time is substantially equal to the third time.

83. (New) A method of producing a substantially constant amplitude ratio of a first signal amplitude to a second signal amplitude in an audio program, the method comprising:

retrieving a first value representative of the first signal amplitude;  
retrieving a second value representative of the second signal amplitude;  
calculating a third value representative of the first signal amplitude at a first time;  
calculating a fourth value representative of the second signal amplitude of the second signal at the first time;  
generating a first adjusted signal amplitude comprising a product of the first signal amplitude at a second time and a ratio of the first value to the third value;  
generating a second adjusted signal amplitude comprising a product of the second signal amplitude at the second time and a ratio of the second value to the fourth value; and  
combining the first adjusted signal amplitude and the second adjusted signal amplitude to produce an output signal.

84. (New) The method of claim 83, wherein the first signal comprises substantially a voice signal, and the second signal comprises substantially audio content other than the voice signal.

85. (New) The method of claim 83, further comprising:  
storing at least one of the first signal amplitude and the second signal amplitude prior to  
retrieving the first value;  
receiving a signal to retrieve the first value at the first time; and  
storing at least one of a fifth value representative of the first adjusted signal amplitude  
and a sixth value representative of the second adjusted signal amplitude.
86. (New) The method of claim 83, wherein at least one of the first value, the second value,  
the third value and the fourth value is a value representative of an instantaneous signal amplitude.
87. (New) The method of claim 83, wherein at least one of the first value, the second value,  
the third value and the fourth value is a value representative of a standard deviation of signal  
amplitude.
88. (New) The method of claim 83, wherein at least one of the first value, the second value,  
the third value and the fourth value is a value representative of a peak signal level over a period  
of time.
89. (New) The method of claim 83, further comprising:  
detecting segments of the audio program when the second signal amplitude is  
substantially zero, wherein if during the detected segment, the fourth value is calculated to be  
less than the second value, then limiting the second adjusted signal level amplitude to a  
predetermined value.
90. (New) The method of claim 83, wherein if the fourth value is less than the second value,  
then adjusting the second adjusted signal amplitude to be equal to the second signal amplitude.
91. (New) The method of claim 83, wherein the first time is substantially equal to the second  
time.

92. (New) A method of producing a substantially constant amplitude ratio of a first signal amplitude to second signal amplitude in an audio program, the method comprising:  
calculating a reference value representative of the second signal amplitude at a first time;  
calculating a comparison value representative of the second signal amplitude at a second time, the second time being subsequent to the first time;  
generating an adjusted signal amplitude comprising a product of the second signal amplitude and a ratio of the reference value to the comparison value; and  
combining the first signal amplitude and the adjusted signal amplitude to produce an output signal.
93. (New) The method of claim 92, wherein the first signal comprises substantially a voice signal, and the second signal comprises substantially audio content other than the voice signal.
94. (New) The method of claim 92, further comprising:  
adjusting the first signal amplitude prior to calculating the reference value;  
receiving a signal to initiate the calculation of the reference value at the first time; and  
storing at least one of a first value representative of the first signal amplitude and a second value representative of the adjusted signal amplitude.
95. (New) The method of claim 92, wherein at least one of the reference value and the comparison value is a value representative of an instantaneous signal amplitude.
96. (New) The method of claim 92, wherein at least one of the reference value and the comparison value is a value representative of a standard deviation of signal amplitude.
97. (New) The method of claim 92, wherein at least one of the reference value and the comparison value is a value representative of a peak signal level over a period of time.

98. (New) The method of claim 92, further comprising:  
selecting a ratio of the first signal amplitude to the second signal amplitude prior to  
calculating the reference value; and  
receiving an initiation signal to initiate calculation of the reference value at the first time.
99. (New) The method of claim 98, further comprising:  
receiving a ratio input signal from a user, wherein the ratio is selected based on the ratio  
input signal.
100. (New) The method of claim 98, wherein the ratio is selected by adjusting the first signal  
amplitude independent of adjusting the second signal amplitude.
101. (New) The method of claim 98, wherein the ratio is selected by adjusting of the second  
signal amplitude independent of adjusting the first signal amplitude.
102. (New) The method of claim 98, wherein the ratio is selected by simultaneously adjusting  
the first and second signals by one of:  
increasing the first signal amplitude and commensurately decreasing the second signal  
amplitude, and  
decreasing the first signal amplitude and commensurately increasing the second signal  
amplitude.
103. (New) An apparatus that produces a substantially constant amplitude ratio of a first signal  
amplitude to a second signal amplitude in an audio program, the apparatus comprising:  
a memory; and  
a processor that calculates a first value representative of the first signal amplitude at a  
first time, calculates a second value representative of the second signal amplitude at the first  
time, calculates a third value representative of the first signal amplitude at a second time, the  
second time being subsequent to the first time, calculates a fourth value representative of the



second signal amplitude of the second signal at the second time, generates a first adjusted signal amplitude comprising a product of the first signal amplitude at a third time and a ratio of the first value to the third value, generates a second adjusted signal amplitude comprising a product of the second signal amplitude at the third time and a ratio of the second value to the fourth value, and combines the first adjusted signal amplitude and the second adjusted signal amplitude to produce an output signal.

104. (New) The apparatus of claim 103, wherein the first signal comprises substantially a voice signal, and the second signal comprises substantially audio content other than the voice signal.

105. (New) The apparatus of claim 103, wherein the processor adjusts the first signal amplitude prior to calculating the first value, receives a signal to initiate the calculation of the first value at the first time, and stores at least one of a fifth value representative of the first adjusted signal amplitude and a sixth value representative of the second adjusted signal amplitude in the memory.

106. (New) The apparatus of claim 103, wherein at least one of the first value, the second value, the third value and the fourth value is a value representative of an instantaneous signal amplitude.

107. (New) The apparatus of claim 103, wherein at least one of the first value, the second value, the third value and the fourth value is a value representative of a standard deviation of signal amplitude.

108. (New) The apparatus of claim 103, wherein at least one of the first value, the second value, the third value and the fourth value is a value representative of a peak signal level over a period of time.

109. (New) The apparatus of claim 103, wherein the processor selects a ratio of the first signal amplitude to the second signal amplitude prior to calculating the first value, and receives an initiation signal to initiate calculation of the first value at the first time.

110. (New) The apparatus of claim 109, wherein the processor receives a ratio input signal from a user and selects the ratio based on the ratio input signal.

111. (New) The apparatus of claim 109, wherein the processor selects the ratio by adjusting the first signal amplitude independent of adjusting the second signal amplitude.

112. (New) The apparatus of claim 109, wherein the processor selects the ratio by adjusting of the second signal amplitude independent of adjusting the first signal amplitude.

113. (New) The apparatus of claim 109, wherein the processor selects the ratio by simultaneously adjusting the first and second signals by one of:

increasing the first signal amplitude and commensurately decreasing the second signal amplitude, and

decreasing the first signal amplitude and commensurately increasing the second signal amplitude.

114. (New) The apparatus of claim 103, wherein the processor detects segments of the audio program when the second signal amplitude is substantially zero, wherein if during the detected segment, the processor calculates the fourth value to be less than the second value, then the processor limits the second adjusted signal level amplitude to a predetermined value.

115. (New) The apparatus of claim 103, wherein if the fourth value is less than the second value, then the processor adjusts the second adjusted signal amplitude to be equal to the second signal amplitude.

116. (New) The apparatus of claim 103, wherein the second time is substantially equal to the third time.

117. (New) An apparatus that produces a substantially constant amplitude ratio of a first signal amplitude to a second signal amplitude in an audio program, the apparatus comprising:

a memory; and

a processor that retrieves a first value representative of the first signal amplitude from the memory, retrieves a second value representative of the second signal amplitude from the memory, calculates a third value representative of the first signal amplitude at a first time, calculates a fourth value representative of the second signal amplitude of the second signal at the first time, generates a first adjusted signal amplitude comprising a product of the first signal amplitude at a second time and a ratio of the first value to the third value, generates a second adjusted signal amplitude comprising a product of the second signal amplitude at the second time and a ratio of the second value to the fourth value, and combines the first adjusted signal amplitude and the second adjusted signal amplitude to produce an output signal.

B1  
cont

118. (New) The apparatus of claim 117, wherein the first signal comprises substantially a voice signal, and the second signal comprises substantially audio content other than the voice signal.

119. (New) The apparatus of claim 117, wherein the processor stores at least one of the first signal amplitude and the second signal amplitude in the memory prior to retrieving the first value, receives a signal to retrieve the first value at the first time from the memory, and stores at least one of a fifth value representative of the first adjusted signal amplitude and a sixth value representative of the second adjusted signal amplitude in the memory.

120. (New) The apparatus of claim 117, wherein at least one of the first value, the second value, the third value and the fourth value is a value representative of an instantaneous signal amplitude.

121. (New) The apparatus of claim 117, wherein at least one of the first value, the second value, the third value and the fourth value is a value representative of a standard deviation of signal amplitude.

122. (New) The apparatus of claim 117, wherein at least one of the first value, the second value, the third value and the fourth value is a value representative of a peak signal level over a period of time.

123. (New) The apparatus of claim 117, wherein the processor detects segments of the audio program when the second signal amplitude is substantially zero, and if during the detected segment, the processor calculates the fourth value to be less than the second value, then the processor limits the second adjusted signal level amplitude to a predetermined value.

124. (New) The apparatus of claim 117, wherein if the fourth value is less than the second value, then the processor adjusts the second adjusted signal amplitude to be equal to the second signal amplitude.

125. (New) The apparatus of claim 119, wherein the first time is substantially equal to the second time.

126. (New) An apparatus that produces a substantially constant amplitude ratio of a first signal amplitude to a second signal amplitude in an audio program, the apparatus comprising:

a memory; and

a processor that calculates a reference value representative of the second signal amplitude at a first time, calculates a comparison value representative of the second signal amplitude at a second time, the second time being subsequent to the first time, generates an adjusted signal amplitude comprising a product of the second signal amplitude and a ratio of the reference value to the comparison value, and combines the first signal amplitude and the adjusted signal amplitude to produce an output signal.

127. (New) The apparatus of claim 126, wherein the first signal comprises substantially a voice signal, and the second signal comprises substantially audio content other than the voice signal.

128. (New) The apparatus of claim 126, wherein the processor adjusts the first signal amplitude prior to calculating the reference value, receives a signal to initiate the calculation of the reference value at the first time, and stores at least one of a first value representative of the first signal amplitude and a second value representative of the adjusted signal amplitude in the memory.

129. (New) The apparatus of claim 126, wherein at least one of the reference value and the comparison value is a value representative of an instantaneous signal amplitude.

130. (New) The apparatus of claim 126, wherein at least one of the reference value and the comparison value is a value representative of a standard deviation of signal amplitude.

131. (New) The apparatus of claim 126, wherein at least one of the reference value and the comparison value is a value representative of a peak signal level over a period of time.

132. (New) The apparatus of claim 126, wherein the processor selects a ratio of the first signal amplitude to the second signal amplitude prior to calculating the reference value, and receives an initiation signal to initiate calculation of the reference value at the first time.

133. (New) The apparatus of claim 132, wherein the processor receives a ratio input signal from a user, the processor selecting the ratio based on the ratio input signal.

134. (New) The apparatus of claim 132, wherein the processor selects the ratio by adjusting the first signal amplitude independent of adjusting the second signal amplitude.

135. (New) The apparatus of claim 132, wherein the processor selects the ratio by adjusting of the second signal amplitude independent of adjusting the first signal amplitude.

136. (New) The apparatus of claim 132, wherein the processor selects the ratio by simultaneously adjusting the first and second signals by one of:

increasing the first signal amplitude and commensurately decreasing the second signal amplitude, and

decreasing the first signal amplitude and commensurately increasing the second signal amplitude.

137. (New) A machine-readable medium having stored thereon a plurality of executable instructions, the plurality of instructions comprising instructions to:

calculate a first value representative of a first signal amplitude at a first time;

calculate a second value representative of a second signal amplitude at the first time;

calculate a third value representative of the first signal amplitude at a second time, the second time being subsequent to the first time;

calculate a fourth value representative of the second signal amplitude of the second signal at the second time;

generate a first adjusted signal amplitude comprising a product of the first signal amplitude at a third time and a ratio of the first value to the third value;

generate a second adjusted signal amplitude comprising a product of the second signal amplitude at the third time and a ratio of the second value to the fourth value; and

combine the first adjusted signal amplitude and the second adjusted signal amplitude to produce an output signal.

138. (New) A machine-readable medium having stored thereon a plurality of executable instructions, the plurality of instructions comprising instructions to:

retrieve a first value representative of a first signal amplitude;

retrieve a second value representative of a second signal amplitude;

calculate a third value representative of the first signal amplitude at a first time;  
calculate a fourth value representative of the second signal amplitude of the second signal at the first time;  
generate a first adjusted signal amplitude comprising a product of the first signal amplitude at a second time and a ratio of the first value to the third value;  
generate a second adjusted signal amplitude comprising a product of the second signal amplitude at the second time and a ratio of the second value to the fourth value; and  
combine the first adjusted signal amplitude and the second adjusted signal amplitude to produce an output signal.

139. (New) A machine-readable medium having stored thereon a plurality of executable instructions, the plurality of instructions comprising instructions to:

B1  
cont

calculate a reference value representative of a first signal amplitude at a first time, the first signal and a second signal being included in an audio program;  
calculate a comparison value representative of the first signal amplitude at a second time, the second time being subsequent to the first time;  
generate an adjusted signal amplitude comprising a product of the first signal amplitude at a third time and a ratio of the reference value to the comparison value; and  
combine the second signal amplitude and the adjusted signal amplitude to produce an output signal.

140. (New) A system that provides an audio/visual output to each of a plurality of listeners in a manner that permits individualized audio volume adjustment for the plurality of listeners located in an audience, comprising:

a video device that displays the video portion of the audio/visual output to plurality of listeners located in the audience;  
one or more elements of a storage medium that stores the video portion of the audio/visual output and the corresponding audio portion of the audio/visual output, wherein the audio portion comprises a first audio signal being substantially a voice signal and a second audio

signal including substantially audio content other than the voice signal;

a transmitter that transmits the first and second audio signals from the one or more elements of the storage medium in synchronization with the transmission of the video portion of the audio/visual output, to a plurality of personal listening devices, wherein each of the plurality of personal listening devices is associated with each of the plurality of listeners in the audience, each of the personal listening devices comprising:

a first receiver that receives the first transmitted audio signal;

a second receiver that receives the second transmitted audio signal;

a first adjustment device that adjusts the first audio signal to provide a first adjusted audio signal based on inputs from the user;

a second adjustment device that adjusts the second audio signal to provide a second adjusted audio signal based on inputs from the user;

an audio signal combining device that combines the first adjusted audio signal with the corresponding second adjusted audio signal, to produce a combined audio signal; and

one or more transducers that receives the combined audio signal, converts the combined audio signal to sounds, and outputs the sounds so they may be heard by each of the plurality of listeners associated with each of the plurality of personal listening devices in the audience;

wherein the system permits each of the plurality of listeners to adjust the first and second audio signals independently of other ones of the plurality of listeners in the audience.

141. (New) The system of claim 140, further comprising a speaker system that emits the corresponding audio portion of the motion picture to the audience, if enabled.

142. (New) The system of claim 141, wherein at least one of the first receiver and the second receiver receives the respective transmitted audio signals independently of the speaker system.